

# Stormwater Pond Management



## Regulatory Considerations and Tools



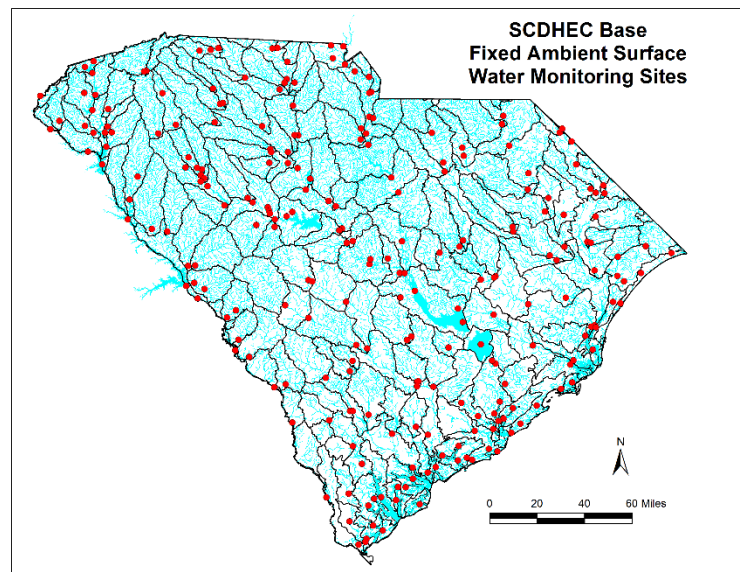
# Why Monitor?

- Regulatory
- Non Regulatory
- Information/Decision Making
- Permit compliance



# Regulatory Monitoring

- Water Quality Standards
- 303(d) Listing of Impaired Waters
- 305(b) Assessment of water quality conditions and water pollution control programs in South Carolina





# 319 Program

- Funds passed through from EPA for water quality improvement projects



# Non-Regulatory Monitoring

- Volunteer monitoring groups
- Find illicit discharges
- Use information for decision-making



# Permit Compliance

National Pollutant Discharge Elimination System –  
NPDES



Point Source – PS

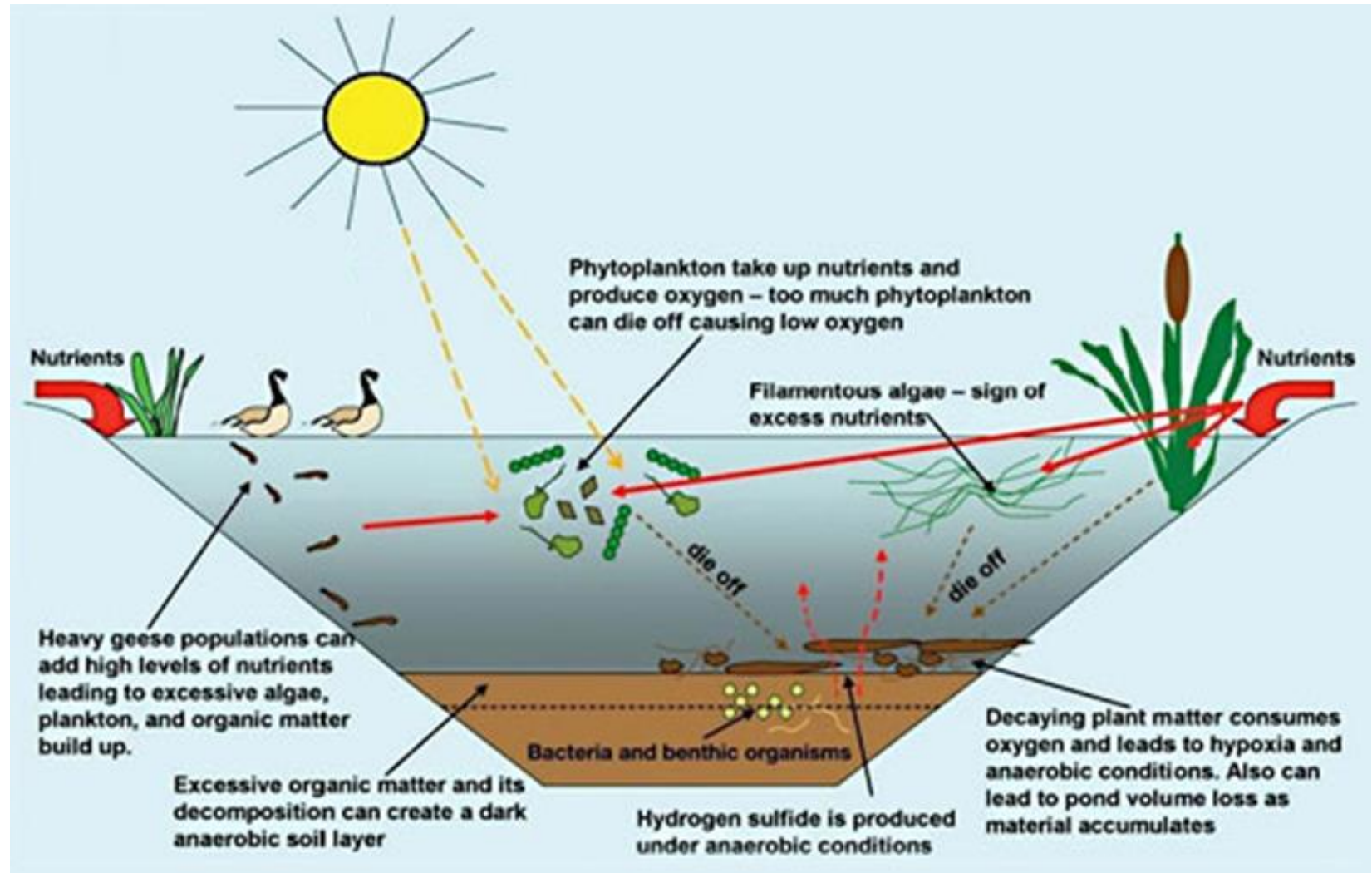


Non-Point Source – NPS

Municipal Separate Storm Sewer System – MS4



# Stormwater Ponds



# What are You Monitoring For?





# Water Quality



- Baseline, improvement, current conditions, trends
- Bacteria, nutrients, chlorophyll a, chemicals, pesticides, biological



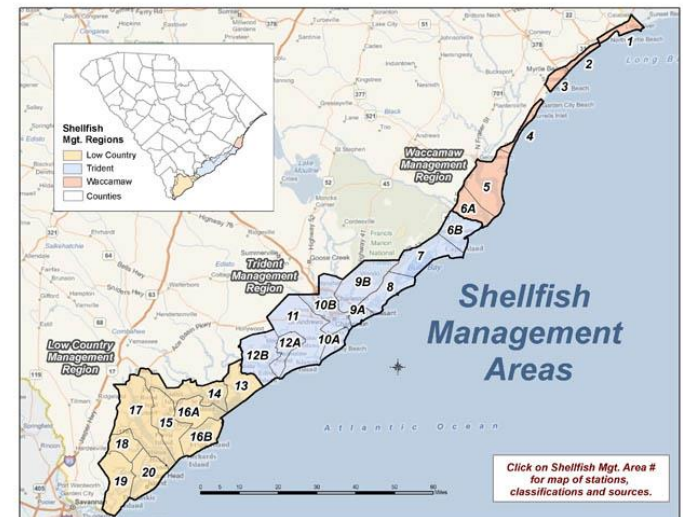
# MS4 Permit Requirements

## READ YOUR PERMIT



# “Sensitive Waters”

- TMDL – Total Maximum Daily Load
- 303(d) – list of Impaired Stations
- SWPA - Source Water Protection Area
- Special Classifications
  - ORW: Outstanding Resource Water
  - Trout
  - Shellfish





# Tools

- Guidance Documents
- Technical Reports
- DHEC Website,
  - Links to other info
  - NOI Tool
  - WATERSHED ATLAS





# South Carolina Department of Health and Environmental Control

Healthy People. Healthy Communities.



## SC Watershed Atlas

Search by Address or County

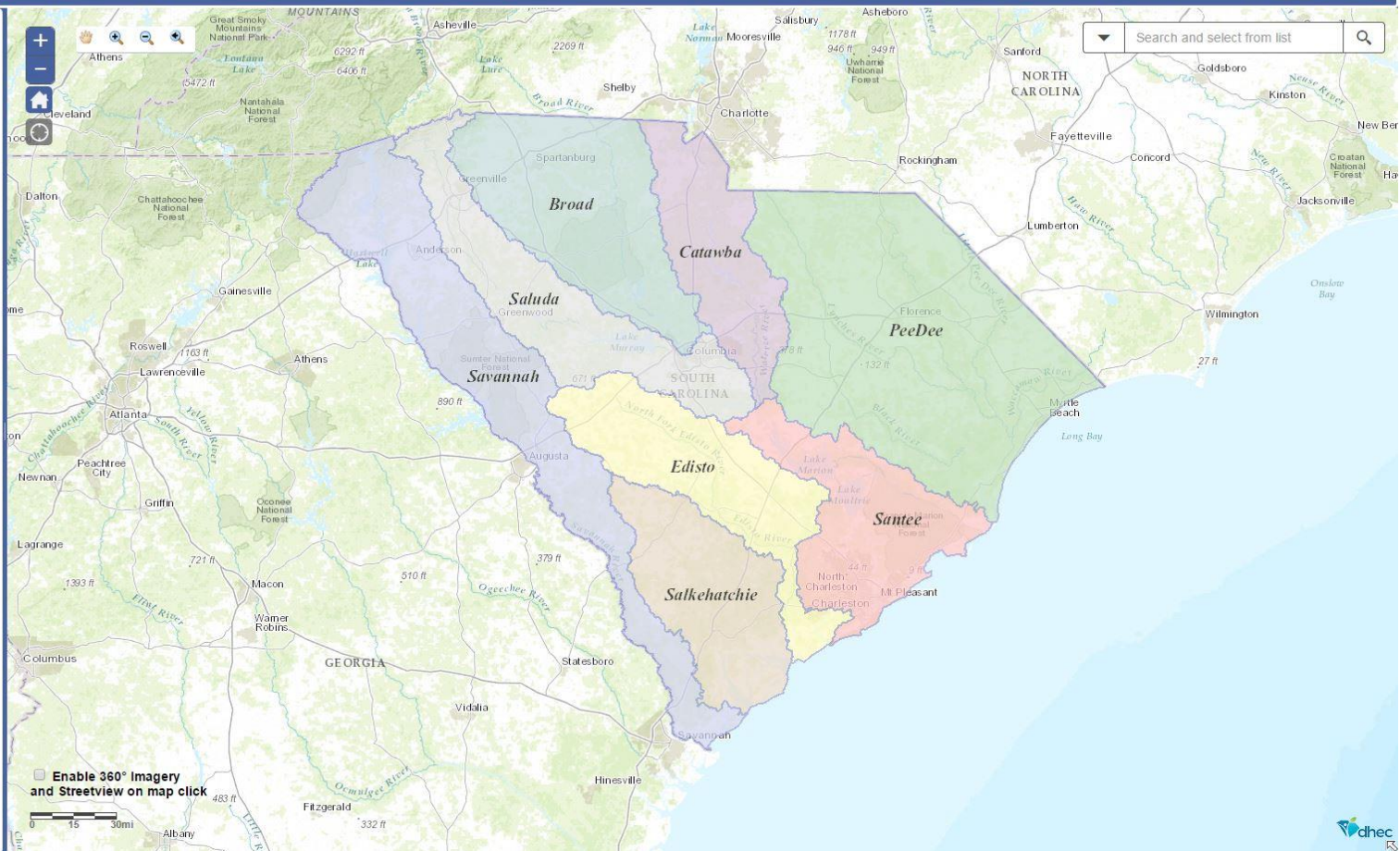
Print



Search and select from list



- Map
- ☒ Watershed Layers
    - ☐ Permits
    - ☐ Public Water Supply
    - ☐ Water Monitoring Stations
    - ☐ Water Quality Assessments
    - ☐ Water Advisories
    - ☐ MS4-Municipal Separate Storm Sewer System
    - ☐ Ecoregions
  - ☒ Watershed Boundaries
    - ☐ Major River Basin (Outline)
    - ☒ Major River Basins
      - Broad
      - Catawba
      - Edisto
      - PeeDee
      - Savannah
      - Santee
      - Savannah
  - ☐ 8-Digit Watersheds
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  - ☐ National Wetland Inventory
  - ☐ Floodplains
  - ☐ Parcels (Zoom in to view) - Visit County Website for
  - ☐ Nat'l Land Cover 2011





## SC Watershed Atlas

Map

☒ **Watershed Layers**

- ☐ + **Permits**
- ☐ + **Public Water Supply**
- ☐ + **Water Monitoring Stations**
- ☐ + **Water Quality Assessments**
- ☐ + **Water Advisories**
- ☒ **MS4-Municipal Separate Storm Sewer System**

- ☐ Medium MS4
- ☐ Small MS4
- ☐ Small MS4 - DHEC Modification
- ☐ Small MS4 - Potentially Designated

☐ + **Ecoregions**

☒ **Watershed Boundaries**

- ☒ ☐ Major River Basin (Outline)
- ☐ + Major River Basins
- ☐ ☒ 8-Digit Watersheds
- ☐ ☐ 10-Digit Watersheds
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☒ ☐ **County Boundary**

☐ + **Water Classification - PROVISIONAL**

☐ ☒ **National Wetland Inventory**

☐ ☒ **Floodplains**

☐ + **Parcels (Zoom in to view) -Visit County Website for most current data**

☐ + **Nat'l Land Cover 2011**





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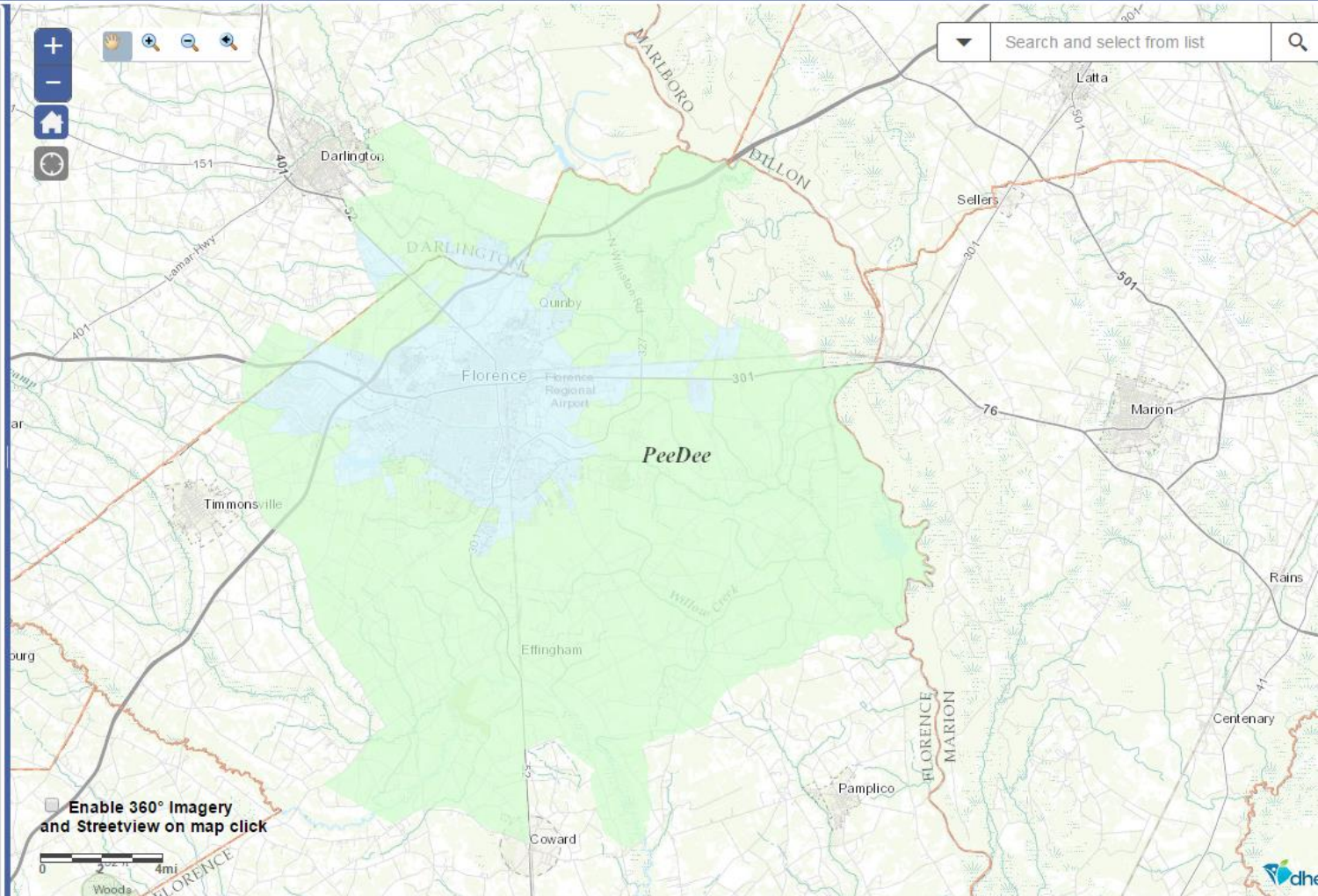


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Measure and Drawing Tools

Basemaps





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        - Use Not Assessed
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    - ☒ ☐ — Modeled Stream Reaches
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    - ☒ ☐ ■ Approved TMDL Watersheds
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      - Approved
      - Restricted
      - Prohibited
    - ☒ ☐  Watershed Based Plans
    - ☒ ☐ ■ DHEC 319 Projects

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#### DHEC 319 Projects

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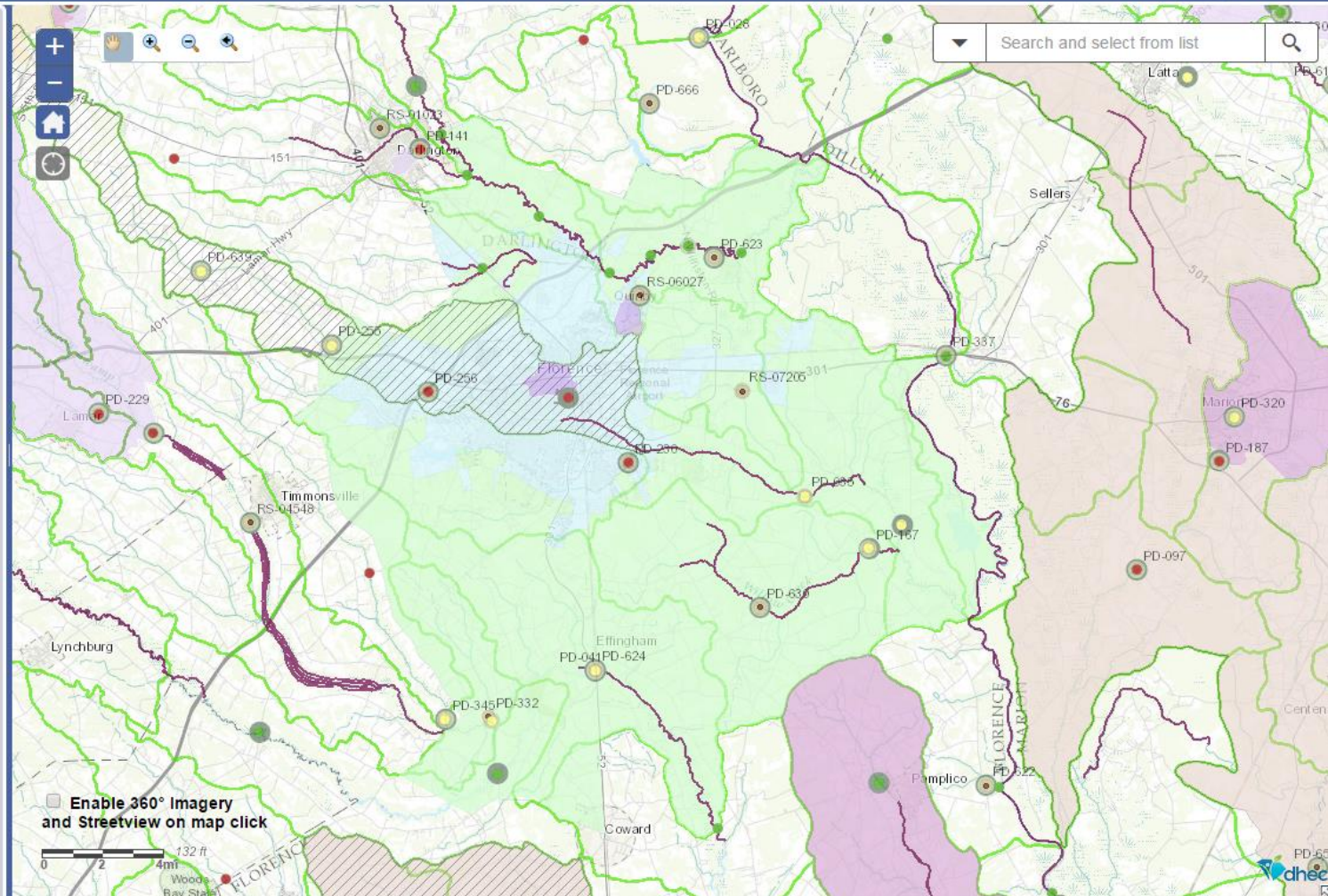
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Enable 360° Imagery and Streetview on map click

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132 ft

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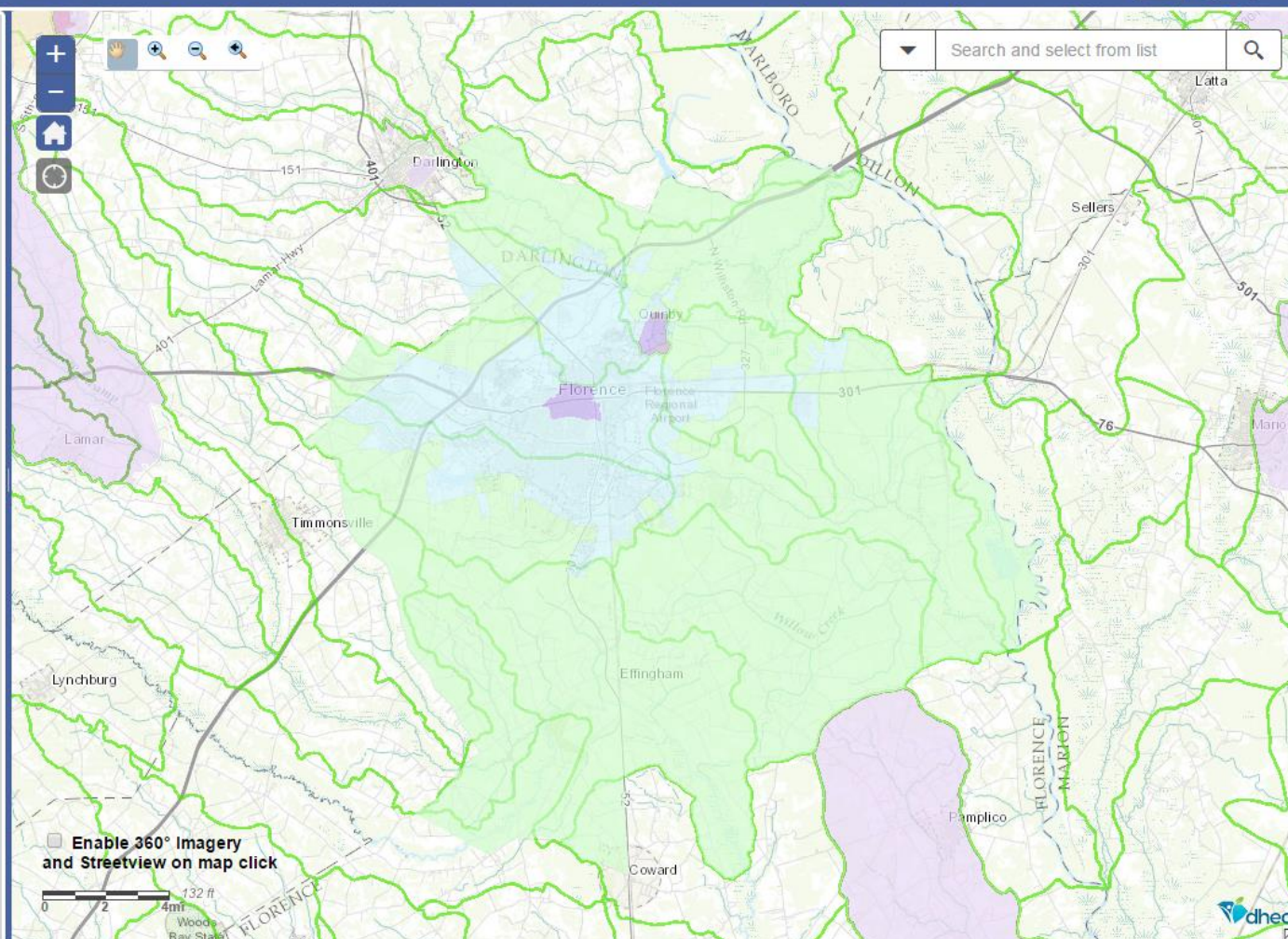
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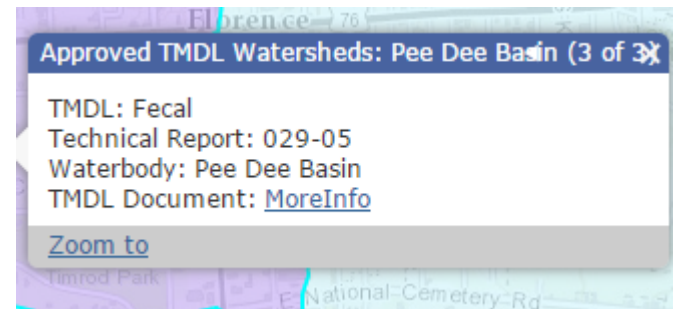
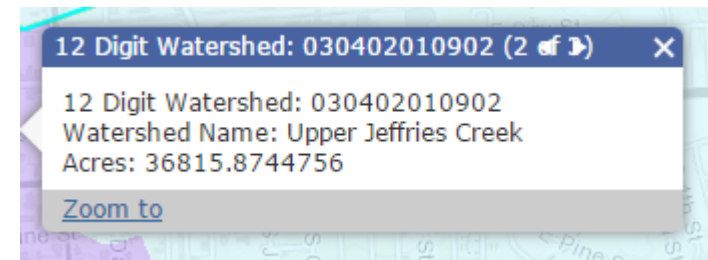
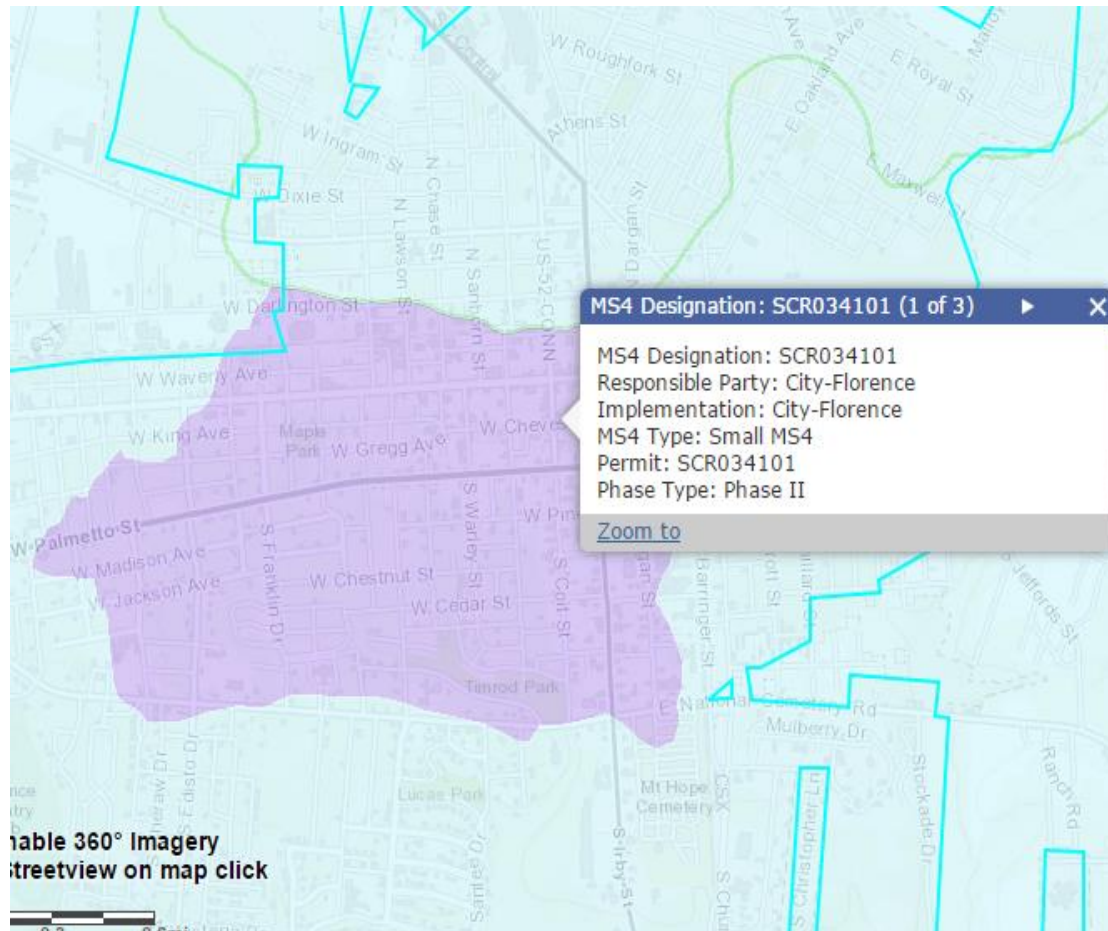
## Basemaps





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**TOTAL MAXIMUM DAILY LOADS**

**FOR**

**FECAL COLIFORM**

**FOR**

Hills Creek, Lynches River, North and South Branch of Wildcat Creek, Flat Creek, Turkey Creek, Nasty Branch, Gulley Branch, Smith Swamp, Little Pee Dee River, Maple Swamp, White Oak Creek, and Chinnners Swamp of the Pee Dee River Basin, South Carolina

Hydrologic Unit Codes: 03040202, 03040205, 03040201, and 03040204



**September 2005**

**SCDHEC Technical Report Number: 029-05**





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Map

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Basemaps



Imagery



Imagery with Labels



Streets



Topographic



Dark Gray Canvas



Light Gray Canvas



National Geographic



Oceans



Terrain with Labels



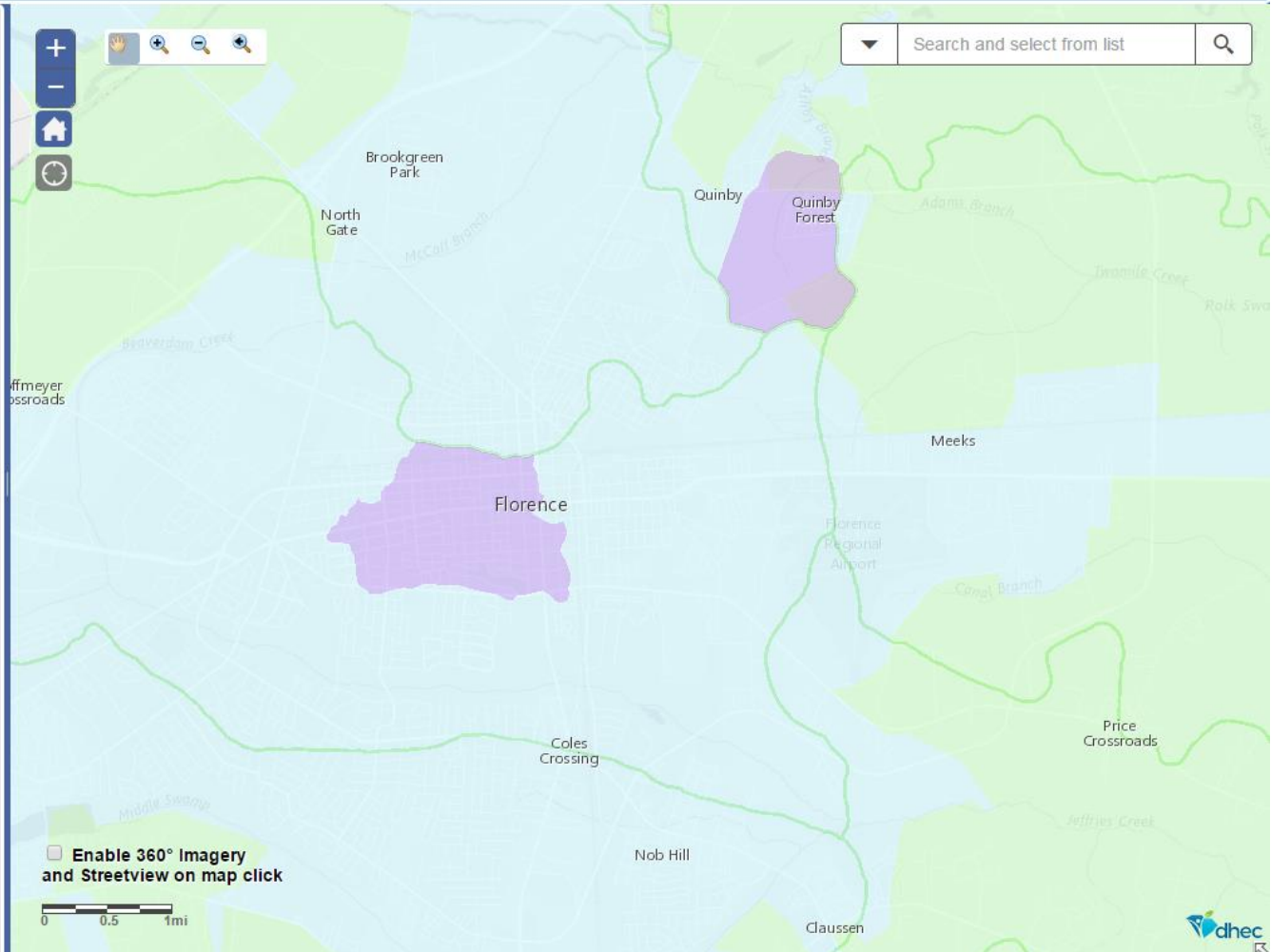
OpenStreetMap



USA Topo Maps



USGS National Map





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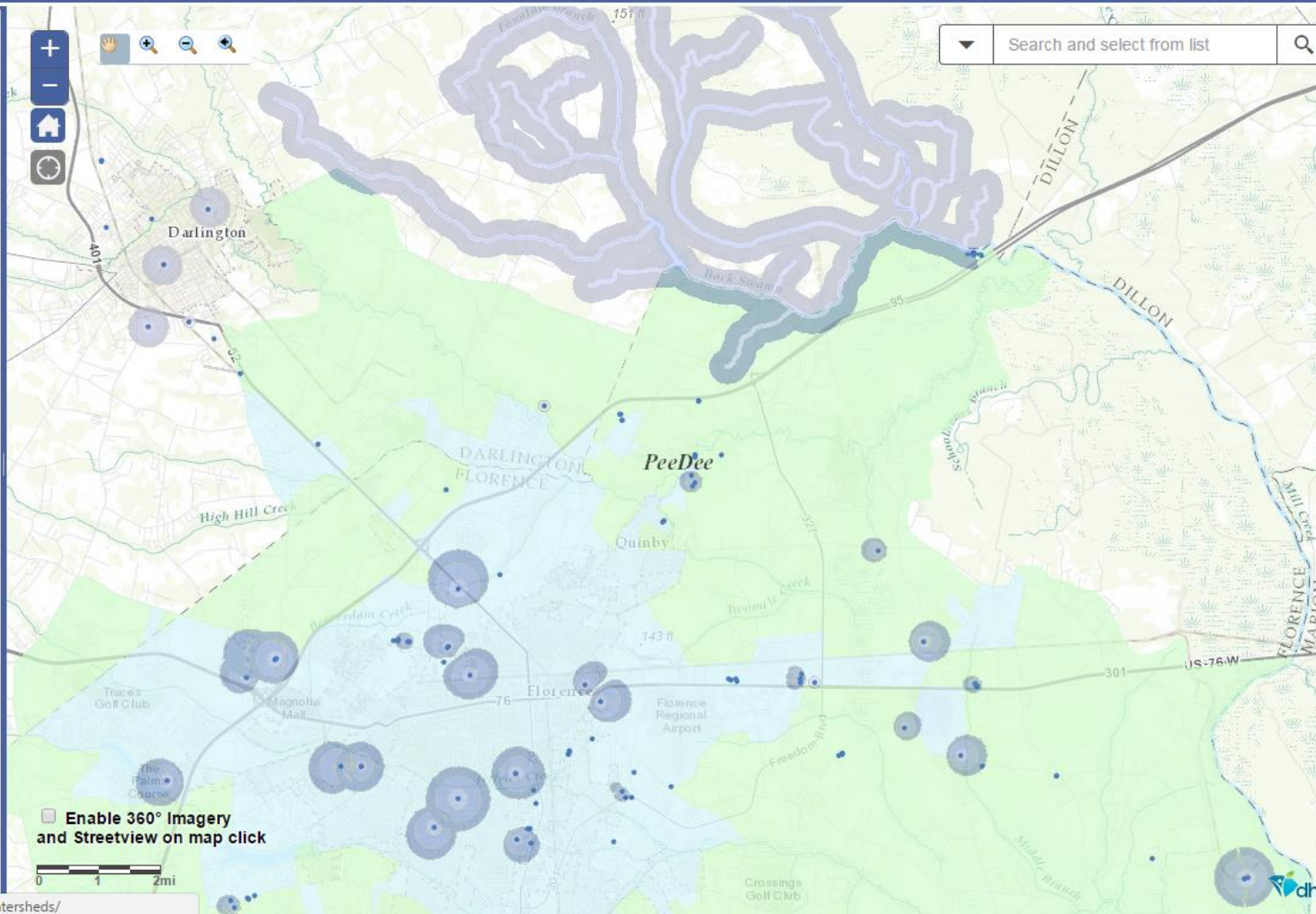
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  - ☒ Surface Water Intakes
    - Pumping
    - Emergency
    - Abandoned
  - ☒ Public Water Supply Wells (PWSW)
  - ☒ SW Protection Areas (SWPA)
    - 200 Ft Buffer
    - 1500 Ft Buffer
  - ☒ PWSW Protection Zones
    - Low Volume Buffer
    - One Year TOT Zone
    - Five Year TOT Zone
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Measure and Drawing Tools

Basemaps

<https://www.scdhec.gov/HomeAndEnvironment/Water/Watersheds/>



**A fool can throw a stone in a pond that  
100 wise men cannot get out.**  
**Saul Bellow**







## Contact Us



**Shawn Clarke**, Stormwater Permitting  
Manager: 803-898-3544  
**Shannon Hicks**, Coastal Stormwater  
Permitting: 843-953-0240

## Stay Connected

